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EXAMINER	
MILLS, DONALD L	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/646,268	Applicant(s) HANNINEN ET AL.	
	Examiner Donald L Mills	Art Unit 2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 March 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 14 is objected to because of the following informalities:

Regarding claim 14, line 14, "said network element" should be corrected to --said one or more first network elements--. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 4, 9, 12, 14, 16, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perkins (US 5,159, 592) in view of Lu et al. (5,577,029), hereinafter referred to as Lu.

Regarding claim 1, Perkins discloses an apparatus and method for managing transmission, which comprises:

A first subsystem (BSS) comprising one or more base stations (BTS) for communicating with mobile terminals (MS) via an air interface (Referring to Figure 2, LAN **2** includes a wireless network comprised of a plurality of header stations (HS) **12** and a plurality of mobile

communication units (MU) **10** employing an RF wireless medium. See column 3, lines 58-61 and 66.)

A second subsystem (WIO, BTS) comprising one or more base stations (BTS) for communicating with the mobile terminals (MS) via an air interface, the first and second subsystems (WIO, BTS) being accessible by a first group of mobile subscribers of the communication system, and comprising (Referring to Figure 2, LAN **3** includes a wireless network comprised of a plurality of header stations (HS) **12** and a plurality of mobile communication units (MU) **10** employing an RF wireless medium, in which LAN **2** and **3** are accessible by a group of mobile subscribers **10**. See column 3, lines 58-61 and 66.) The *second subsystem comprising:*

One or more first network elements (AGW; IGW) for transforming signals from the mobile switching system (MSC) into data packets of the second subsystem (WIO, BTS) and for transforming data packets from the second subsystem (WIO, BTS) into signals of the mobile switching system (MSC) (Referring to Figure 2, local gateway **16** converts IP packets from the global gateway **18** of LAN **3** into data using the wireless network communication and converts data from LAN **3** into IP packets to global gateway **18** and global gateway **18** encapsulates packets with the data with new IP packets destined for local gateway **16**. See column 8, lines 1-6,) *where the one or more first network element is arranged to act as a gateway between the first and second subsystems* (Referring to Figure 2, global gateway **18** connects local gateways **16**.)

One or more second network elements (IMC), connected with one or more base stations (BTS) of the second subsystem (WIO, BTS), for transforming signals from the

base station (BTS) of the second subsystem (WIO, BTS) into data packets from the second subsystem (WIO, BTS) and for transforming data packets from the second subsystem (WIO, BTS) into signals to the base stations (BTS) of the second subsystem (WIO, BTS) (Referring to Figure 2, header station **12** of LAN **3**, converts IP packets from the header station **12** of LAN **3** into data and converts data from LAN **3** into packets at the header station **12**. See column 8, lines 1-6.)

Means (IP, LAN) for delivering data packets in the second subsystem (WIO, BTS) according to a network address assigned to the first and the second network elements of the second subsystem (WIO, BTS) (Referring to Figure 2, packets bearing an IP address are routed to the global gateway **18** destined for local gateway **16** and header station **12** of LAN **3**. See column 7, lines 67-68 and column 8, lines 1-3.)

Means (ILR, GK) for mapping a number identifying a mobile subscriber in the communication system to a network address of the second subsystem (WIO, BTS) when the mobile terminal of the mobile subscriber is able to communicate with a base station (BTS) of the second subsystem (WIO, BTS) (Referring to Figure 2, the global gateway **18** maps an IP address to the mobile unit **10** identifier, which corresponds to its location in LAN **3**, when a mobile unit **10** transmits packets to a remote user via a header station **12** in LAN **3**. See column 8, lines 31-33.) *The means for mapping a number is arranged to manage connections with the first and second subsystems* (Referring to Figure 2, global gateway **18** comprises means for assigning, maintaining and associating "pseudo-IP" addresses with mobile units **10** in LAN **2** or **3**. See column 4, lines 35-38.) *Detecting whether a party of a connection is within the second subsystem and making the*

connection via the first network element for transforming signals towards the parties of the connection which are not within the second subsystem (Referring to Figure 2, when a mobile unit **10** transmits to a remote user, local gateway **16** detects the mobile unit **10** on LAN **3** and converts the data into IP packets to global gateway **18** for the connection with the remote user. See column 8, lines 31-39.)

Perkins does not disclose *making the connection with the second subsystem if all parties of the connection are within the second subsystem.*

Lu teaches a cellular communication network having intelligent switching nodes which comprises making a connection cross-connect between the outgoing path (from MS unit **300**) and the incoming path (to MS unit **302**) that is cross-connected at BTS **330** (See Figure 2A and column 6, lines 41-44.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the intelligent cross-connection method of Lu in the management system of Perkins. One of ordinary skill in the art would have been motivated to so in order to minimize latency during call setup and transmission for communication between mobile units in the same local area network as taught by Lu (See column 3, lines 42-45.) Supporting connections for parties within the same system is analogous to users in the same building, office, or cell cite utilizing the same switch, PBX, or base station for communication, which is well known in the art.

Regarding claim 4, the primary reference further teaches *wherein the means (IP, LAN) for delivering data packets in the second subsystem (WIO, BTS) comprise an IP Protocol*

network (Referring to Figure 2, LAN **3** includes a wireless network wherein the network conforms to TCP/IP. See column 3, lines 58-61 and column 4, lines 11-14.)

Regarding claim 9, Perkins discloses an apparatus and method for managing transmission, which comprises:

A first subsystem (BSS) comprising one or more base stations (BTS) for communicating with mobile terminals (MS) via an air interface (Referring to Figure 2, LAN **2** includes a wireless network comprised of a plurality of header stations (HS) **12** and a plurality of mobile communication units (MU) **10** employing an RF wireless medium. See column 3, lines 58-61 and 66.)

A second subsystem (WIO, BTS) comprising one or more base stations (BTS) for communicating with the mobile terminals (MS) via an air interface, the first and second subsystems (WIO, BTS) being accessible by a first group of mobile subscribers of the communication system, and comprising (Referring to Figure 2, LAN **3** includes a wireless network comprised of a plurality of header stations (HS) **12** and a plurality of mobile communication units (MU) **10** employing an RF wireless medium, which is accessible by a group of mobile units **10**. See column 3, lines 58-61 and 66.) And, the *second subsystem comprising:*

One or more first network elements (AGW; IGW) for transforming signals from the mobile switching system (MSC) into data packets of the second subsystem (WIO, BTS) and for transforming data packets from the second subsystem (WIO, BTS) into signals of the mobile switching system (MSC) (Referring to Figure 2, local gateway **16** converts IP packets from the global gateway **18** of LAN **3** into data using the wireless network

communication and converts data from LAN **3** into IP packets to global gateway **18** and global gateway **18** encapsulates packets with the data with new IP packets destined for local gateway **16**. See column 8, lines 1-6,) *where the one or more first network element is arranged to act as a gateway between the first and second subsystems* (Referring to Figure 2, global gateway **18** connects local gateways **16**.)

One or more second network elements (IMC), connected with one or more base stations (BTS) of the second subsystem (WIO, BTS), for transforming signals from the base station (BTS) of the second subsystem (WIO, BTS) into data packets from the second subsystem (WIO, BTS) and for transforming data packets from the second subsystem (WIO, BTS) into signals to the base stations (BTS) of the second subsystem (WIO, BTS) (Referring to Figure 2, header station **12** of LAN **3**, converts IP packets from the header station **12** of LAN **3** into data and converts data from LAN **3** into packets at the header station **12**. See column 8, lines 2-6.)

Means (IP, LAN) for delivering data packets in the second subsystem (WIO, BTS) according to a network address assigned to the first and the second network elements of the second subsystem (WIO, BTS) (Referring to Figure 2, packets bearing IP an address are routed to the global gateway **18** destined for local gateway **16** and header station **12** of LAN **3**. See column 7, lines 67-68 and column 8, lines 1-3.)

Network element (ILR) comprising a number of interfaces to collect and store permanent and variable subscriber information of a subscriber of the first group from the mobile switching system (MSC) and the second subsystem (WIO, BTS) (Referring to Figure 2, global gateway **18** comprises multiple interfaces connecting to LAN **2** and **3** and the remote user; stores the IP

address of the remote user in order to facilitate the transmission of packets from the remote user to the mobile unit **10**; and permanently or temporarily stores the IP address associated with mobile units **10**. See column 5, lines 6-11.) *The network element managing connections with the first and second subsystems* (Referring to Figure 2, global gateway **18** comprises means for assigning, maintaining and associating "pseudo-IP" addresses with mobile units **10** in LAN **2** or **3**. See column 4, lines 35-38.) And, *detecting whether a party of a connection is within the second subsystem and making the connection via the first network element for transforming signals towards the parties of the connection which are not within the second subsystem* (Referring to Figure 2, when a mobile unit **10** transmits to a remote user, local gateway **16** detects the mobile unit **10** on LAN **3** and converts the data into IP packets to global gateway **18** for the connection with the remote user. See column 8, lines 31-39.)

Perkins does not disclose *making the connection with the second subsystem if all parties of the connection are within the second subsystem.*

Lu teaches a cellular communication network having intelligent switching nodes which comprises making a connection cross-connect between the outgoing path (from MS unit **300**) and the incoming path (to MS unit **302**) that is cross-connected at BTS **330** (See Figure 2A and column 6, lines 41-44.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the intelligent cross-connection method of Lu in the management system of Perkins. One of ordinary skill in the art would have been motivated to so in order to minimize latency during call setup and transmission for communication between mobile units in the same local area network as taught by Lu (See column 3, lines 42-45.) Supporting connections for

parties within the same system is analogous to users in the same building, office, or cell cite utilizing the same switch, PBX, or base station for communication, which is well known in the art.

Regarding claim 12, the primary reference further teaches *sending, as a response to a query from another network element (GK), the subscriber information* (Referring to Figure 2, packets are routed, to the local gateway **16**, by the global gateway **18** which comprises the IP address of the destination mobile unit **10**. See column 7, lines 59-60.)

Regarding claim 14, Perkins discloses an apparatus and method for managing transmission, which comprises:

A first subsystem (BSS) comprising one or more base stations (BTS) for communicating with mobile terminals (MS) via an air interface (Referring to Figure 2, LAN **2** includes a wireless network comprised of a plurality of header stations (HS) **12** and a plurality of mobile communication units (MU) **10** employing an RF wireless medium. See column 3, lines 58-61 and 66.)

A second subsystem (WIO, BTS) comprising one or more base stations (BTS) for communicating with the mobile terminals (MS) via an air interface, the first and second subsystems (WIO, BTS) being accessible by a first group of mobile subscribers of the communication system, and comprising (Referring to Figure 2, LAN **3** includes a wireless network comprised of a plurality of header stations (HS) **12** and a plurality of mobile communication units (MU) **10** employing an RF wireless medium, in which LAN **2** and **3** are accessible by a group of mobile subscribers **10**. See column 3, lines 58-61 and 66.) The *second subsystem comprising:*

One or more first network elements (AGW; IGW) for transforming signals from the mobile switching system (MSC) into data packets of the second subsystem (WIO, BTS) and for transforming data packets from the second subsystem (WIO, BTS) into signals of the mobile switching system (MSC) (Referring to Figure 2, local gateway **16** converts IP packets from the global gateway **18** of LAN **3** into data using the wireless network communication and converts data from LAN **3** into IP packets to global gateway **18** and global gateway **18** encapsulates packets with the data with new IP packets destined for local gateway **16**. See column 8, lines 1-6,) *where the one or more first network element is arranged to act as a gateway between the first and second subsystems* (Referring to Figure 2, global gateway **18** connects local gateways **16**.)

One or more second network elements (IMC), connected with one or more base stations (BTS) of the second subsystem (WIO, BTS), for transforming signals from the base station (BTS) of the second subsystem (WIO, BTS) into data packets from the second subsystem (WIO, BTS) and for transforming data packets from the second subsystem (WIO, BTS) into signals to the base stations (BTS) of the second subsystem (WIO, BTS) (Referring to Figure 2, header station **12** of LAN **3**, converts IP packets from the header station **12** of LAN **3** into data and converts data from LAN **3** into packets at the header station **12**. See column 8, lines 1-6.)

Means (IP, LAN) for delivering data packets in the second subsystem (WIO, BTS) according to a network address assigned to the first and the second network elements of the second subsystem (WIO, BTS) (Referring to Figure 2, packets bearing an IP address are routed to

the global gateway **18** destined for local gateway **16** and header station **12** of LAN **3**. See column 7, lines 67-68 and column 8, lines 1-3.)

The element comprising means for querying from another network element (ILR) the network address of the network element (IMC) of the second subsystem (WIO) connected to the base (BTS) the mobile terminal (MS) the subscriber is currently able to communicate with (Referring to Figure 2, packets are routed, to the local gateway **16**, by the global gateway **18** which comprises the IP address of the destination mobile unit **10**. See column 7, lines 59-60.) *The element managing connections with the first and second subsystems* (Referring to Figure 2, global gateway **18** comprises means for assigning, maintaining and associating "pseudo-IP" addresses with mobile units **10** in LAN **2** or **3**. See column 4, lines 35-38.) And, *detecting whether a party of a connection is within the second subsystem and making the connection via the first network element for transforming signals towards the parties of the connection which are not within the second subsystem* (Referring to Figure 2, when a mobile unit **10** transmits to a remote user, local gateway **16** detects the mobile unit **10** on LAN **3** and converts the data into IP packets to global gateway **18** for the connection with the remote user. See column 8, lines 31-39.)

Perkins does not disclose *making the connection with the second subsystem if all parties of the connection are within the second subsystem.*

Lu teaches a cellular communication network having intelligent switching nodes which comprises making a connection cross-connect between the outgoing path (from MS unit **300**) and the incoming path (to MS unit **302**) that is cross-connected at BTS **330** (See Figure 2A and column 6, lines 41-44.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the intelligent cross-connection method of Lu in the management system of Perkins. One of ordinary skill in the art would have been motivated to so in order to minimize latency during call setup and transmission for communication between mobile units in the same local area network as taught by Lu (See column 3, lines 42-45.) Supporting connections for parties within the same system is analogous to users in the same building, office, or cell cite utilizing the same switch, PBX, or base station for communication, which is well known in the art.

Regarding claim 16, the primary reference further teaches *means (116) for mapping a number identifying a mobile subscriber in the communication system to a network address of the second subsystem (WIO) when the mobile terminal of the mobile subscriber is able to communicate with a base station of the second subsystem (WIO, BTS)* (Referring to Figure 2, conventional IP addressing techniques, which maps the IP address to the mobile unit **10** ID, are utilized when a mobile unit **10** transmits packets to a remote user via a header station **12** in LAN **3**. See column 8, lines 31-33.)

Regarding claim 18, Perkins discloses an apparatus and method for managing transmission, which comprises:

A first subsystem (BSS) comprising one or more base stations (BTS) for communicating with mobile terminals (MS) via an air interface (Referring to Figure 2, LAN **2** includes a wireless network comprised of a plurality of header stations (HS) **12** and a plurality of mobile communication units (MU) **10** employing an RF wireless medium. See column 3, lines 58-61 and 66.)

A second subsystem (WIO, BTS) comprising one or more base stations (BTS) for communicating with the mobile terminals (MS) via an air interface, the second subsystem (WIO, BTS) being accessible by a first group of mobile subscribers of the communication system, the method comprising (Referring to Figure 2, LAN **3** includes a wireless network comprised of a plurality of header stations (HS) **12** and a plurality of mobile communication units (MU) **10** employing an RF wireless medium, which is accessible by a group of mobile subscribers. See column 3, lines 58-61 and 66.):

Transforming signals from the mobile switching system (MSC) and the base station (BTS) of the second subsystem into data packets of the second subsystem (WIO, BTS) and for transforming data packets of the second subsystem (WIO, BTS) into signals of the mobile switching system (MSC) and the base station (BTS) of the second subsystem (Referring to Figure 2, local gateway **16** converts IP packets from the global gateway **18** and header station **12** of LAN **3** into data using the wireless network communication and converts data from LAN **3** into IP packets to global gateway **18** and header station **12**. See column 8, lines 2-6.)

Delivering data packets in the second subsystem (WIO, BTS) according to a network address assigned to network elements of the second subsystem (WIO, BTS) (Referring to Figure 2, packets bearing IP an address are routed to the global gateway **18** destined for local gateway **16** and header station **12** of LAN **3**. See column 7, lines 67-68 and column 8, lines 1-3.)

Mapping a number identifying a mobile subscriber in the communication system to a network address of the second subsystem (WIO) when the mobile terminal of the

mobile subscriber is able to communicate with a base station of the second subsystem (WIO, BTS) (Referring to Figure 2, conventional IP addressing techniques, which maps the IP address to the mobile unit **10** ID, are utilized when a mobile unit **10** transmits packets to a remote user via a header station **12** in LAN **3**. See column 8, lines 31-33.)

Managing connections with the first and second subsystems (Referring to Figure 2, global gateway **18** comprises means for assigning, maintaining and associating "pseudo-IP" addresses with mobile units **10** in LAN **2** or **3**. See column 4, lines 35-38.) *Detecting whether a party of a connection is within the second subsystem and making the connection via the first network element for transforming signals towards the parties of the connection which are not within the second subsystem* (Referring to Figure 2, when a mobile unit **10** transmits to a remote user, local gateway **16** detects the mobile unit **10** on LAN **3** and converts the data into IP packets to global gateway **18** for the connection with the remote user. See column 8, lines 31-39.)

Perkins does not disclose *making the connection with the second subsystem if all parties of the connection are within the second subsystem.*

Lu teaches a cellular communication network having intelligent switching nodes which comprises making a connection cross-connect between the outgoing path (from MS unit **300**) and the incoming path (to MS unit **302**) that is cross-connected at BTS **330** (See Figure 2A and column 6, lines 41-44.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the intelligent cross-connection method of Lu in the management system of Perkins. One of ordinary skill in the art would have been motivated to so in order to minimize latency during call setup and transmission for communication between mobile units in the same

local area network as taught by Lu (See column 3, lines 42-45.) Supporting connections for parties within the same system is analogous to users in the same building, office, or cell cite utilizing the same switch, PBX, or base station for communication, which is well known in the art.

4. Claims 2, 3, 5, 7, 8, 10, 11, 13, 17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perkins (US 5,159, 592) in view of Lu et al. (5,577,029), hereinafter referred to as Lu, further in view of Robert et al. (WO 95/33348A1), hereinafter referred to as Robert.

Regarding claims 2, 17, and 19 as explained above in the rejection statement of claims 1 and 14; Perkins discloses all the claim limitations of claims 1 and 14 (parent claim).

Perkins does not disclose *wherein the second subsystem (WIO, BTS) comprises means (GK, ILR) (Claim 2)/means (116) (Claim 17) for routing/routing (Claim 19) a call between subscribers of the first group within the second subsystem (WIO, BTS), as a response to each of the numbers identifying the mobile subscribers in the communication system having a mapping to a network address of the second subsystem (WIO, BTS)*

Robert teaches the interconnecting of a first and second communication system where performing translation of identities in the case of an outgoing call from the DECT system into the GSM system is accomplished (See Figures 10a and 10b, page 17, lines 18-22.) Robert further teaches that it is advantageous to interconnect systems to provide for handovers between a first and second system (See page 1, lines 15-18.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the system of Robert in the IP network address management system of

Perkins. One of ordinary skill in the art would have been motivated to so in order to provide handoffs between a first and second communication system.

Regarding claim 3, as explained above in the rejection statement of claim 1, Perkins discloses all the claim limitations of claim 1 (parent claim).

Perkins does not disclose *wherein the second subsystem (WIO, BTS) comprises a subscriber register (ILR) for storing location information of a subscriber of the first group, the location information comprising data about the network address of the network element connected to the base station the mobile terminal of the subscriber is currently able to communicate with.*

Robert teaches the interconnecting of a first and second communication system where DECT system maintains where the subscriber is currently registered for routing a call that is incoming to the DECT system for that subscriber (See page 21, lines 25-29.) Robert further teaches that the caller may always dial the same MSISDN and therefore does not have to know the current location of the subscriber (See page 21, lines 30-33.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the subscriber registering system of Robert in the IP network address management system of Perkins. One of ordinary skill in the art would have been motivated to so in order to allow subscribers to dial a terminal without having to know the current location of that terminal.

Regarding claim 5 as explained above in the rejection statement of claim 1, Perkins discloses all the claim limitations of claim 1 (parent claim).

Perkins does not disclose *the first group of mobile subscribers comprising employees of an office given an access to the IP Protocol network.*

Robert teaches the interconnecting of a first and second communication system where the second communication system comprises a cordless system such as the DECT system that is designed for operation in indoor environments (See page 1, lines 30-35.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the pico-cellular system of Robert in the IP network address management system of Perkins. One of ordinary skill in the art would have been motivated to so in order to provide handoffs between a cordless access system and a cellular mobile communication system.

Regarding claim 7 as explained above in the rejection statement of claim 1, Perkins discloses all the claim limitations of claim 1 (parent claim).

Perkins *wherein the means (GK, ILR) for routing a call between subscribers of the first group within the second subsystem (WIO, BTS) are arranged to page local calls originating from or terminating to a terminal of a subscriber of the first group.*

Robert teaches the interconnecting of a first and second communication system where the called party's number is determined, whether in the GSM or DECT communications system, based on the IMSI-code in a paging message (See page 13, lines 13-15.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement paging message method of Robert in the IP network address management system of Perkins. One of ordinary skill in the art would have been motivated to so in order to determine the number of the called party when it is unknown.

Regarding claim 8 as explained above in the rejection statement of claim 1, Perkins discloses all the claim limitations of claim 1 (parent claim).

Perkins does not disclose *wherein the means (GK, ILR) for routing are arranged to route the call to the mobile switching system (MSC), as a response to not fulfilling either of the following conditions: each of the subscribers belong to the first group, a number identifying each of the subscribers in the communication system have a mapping to a network address of the second subsystem (WIO, BTS).*

Robert teaches the interconnecting of a first and second communication system where call routing is performed through the MSC whether the subscribers belong to the GSM or DECT network (See page 9, lines 32-35.) Robert further teaches that it is advantageous to interconnect systems to provide for handovers between a first and second system (See page 1, lines 15-18.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement MSC of Robert in the IP network address management system of Perkins. One of ordinary skill in the art would have been motivated to so in order to provide handoffs when interconnecting a first and second communications system.

Regarding claim 10 as explained below in the rejection statement of claim 9, Perkins discloses all the claim limitations of claim 9 (parent claim).

Perkins does not disclose *wherein the variable information comprises the network address of the network element (IMC) of the second subsystem (WIO, BTS) connected to the base station (BTS) the mobile terminal (MS) the subscriber is currently able to communicate with.*

Robert teaches the interconnecting of a first and second communication system utilizing a visitor location register, which by definition temporarily stores subscription data for subscribers

currently situated in the service area of the corresponding MSCs (See page 7, lines 31-33.) Robert further teaches that it is advantageous to interconnect systems to provide for handovers between a first and second system (See page 1, lines 15-18.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement VLR of Robert in the IP network address management system of Perkins. One of ordinary skill in the art would have been motivated to so in order to store subscriber information prior to a handoff between communication systems.

Regarding claim 11 as explained below in the rejection statement of claim 9, Perkins discloses all the claim limitations of claim 9 (parent claim).

Perkins does not disclose *wherein the element (ILR) is arranged to collect and store the subscriber information at least during signaling between the base station (BTS) and the mobile terminal (MS) for location update of the subscriber to the second subsystem (WIO, BTS).*

Robert teaches the interconnecting of a first and second communication system utilizing a visitor location register, which by definition temporarily stores subscription data for subscribers currently situated in the service area of the corresponding MSCs (See page 7, lines 31-33.) Robert further teaches that it is advantageous to interconnect systems to provide for handovers between a first and second system (See page 1, lines 15-18.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement VLR of Robert in the IP network address management system of Perkins. One of ordinary skill in the art would have been motivated to so in order to store subscriber information prior to a handoff between communication systems.

Regarding claim 13 as explained below in the rejection statement of claim 9, Perkins discloses all the claim limitations of claim 9 (parent claim).

Perkins does not disclose *the interfaces comprising a MAP interface between the network element and at least one of the following: Home Location Register (HLR) of a GSM network, Visitor Location Register (VLR) of a GSM network.*

Robert teaches the interconnecting of a first and second communication system utilizing a visitor location register, which by definition utilizes a MAP/G interface for communicating with another MSC VLR (See page 7, lines 31-33.) Robert further teaches that it is advantageous to interconnect systems to provide for handovers between a first and second system (See page 1, lines 15-18.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement VLR of Robert in the IP network address management system of Perkins. One of ordinary skill in the art would have been motivated to so in order to store subscriber information prior to a handoff between communication systems.

5. Claims 6 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perkins (US 5,159, 592) in view of Lu et al. (5,577,029), hereinafter referred to as Lu, further in view of Karlsson et al. (US 6,222, 829 B1), hereinafter referred to as Karlsson.

Regarding claim 6 as explained above in the rejection statement of claim 1, Perkins discloses all the claim limitations of claim 1 (parent claim).

Perkins does not disclose *wherein the means (IP, LAN) for delivering data packets in the second subsystem (WIO, BTS) support H.323 standard.*

Karlsson teaches a method for effectuating voice communication between a mobile station and a mobile radio network across the Internet/Intranet **190** utilizing the ITU-T H.323 protocol (See Figure 1, column 4, lines 17-18.) Karlsson further teaches that providing voice communication between a mobile station that operates in a packet mode is advantageous when traffic channels are otherwise unavailable (See column 1, lines 46-56.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the packet mode of Karlsson in the IP network address management system of Perkins. One of ordinary skill in the art would have been motivated to so in order to permit packet mode communication when traffic channels are unavailable.

Regarding claim 15 as explained above in the rejection statement of claim 14, Perkins discloses all the claim limitations of claim 14 (parent claim).

Perkins does not disclose *wherein the network element is arranged to implement functions of a H.323 Gatekeeper.*

Karlsson teaches a method for effectuating voice communication between a mobile station and a mobile radio network across the Internet/Intranet **190** utilizing the ITU-T H.323 protocol (See Figure 1, column 4, lines 17-18.) Karlsson further teaches that providing voice communication between a mobile station that operates in a packet mode is advantageous when traffic channels are otherwise unavailable (See column 1, lines 46-56.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the packet mode of Karlsson in the IP network address management system of Perkins. One of ordinary skill in the art would have been motivated to so in order to permit packet mode communication when traffic channels are unavailable.

Response to Arguments

6. Applicant's arguments with respect to claim 1-19 have been considered but are moot in view of the new grounds of rejection.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald L Mills whose telephone number is 703-305-7869. The examiner can normally be reached on 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 703-305-4744. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

Donald L Mills

May 18, 2004

JOHN PEZZLO
PRIMARY EXAMINER